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No. 37

CLASSIFICATION OF THE ERMINES OF EASTERN SIBERIA

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To ascertain if the ermine (*Mustela arctica* Merriam) of North America was more than subspecifically different from the ermine (*Mustela erminea* Linnaeus) of the Old World, I borrowed, in 1937 at the Leningrad Academy of Sciences, through the courtesy of Professor B. S. Vinogrodov and Anatol I. Argyropulo, selected pertinent specimens from eastern Asia, for study in America. Although comparisons make clear, as I shall explain in a later paper treating of all of the American forms of the subgenus *Mustela*, that a single circumpolar species is involved, there appears to be some confusion about the subspecific names for this weasel in eastern Asia. The purpose of the present communication is to clear away this confusion.

Mustela erminea Linnaeus 1758 is the earliest available name and therefore it will apply for the full species. In 1857, Baird (Mammals of North America, p. 172) proposed for the ermine of extreme eastern Asia the name *Putorius kaneii*. The two specimens that he had came from Semipalatinsk, Siberia, and Arikam Island, Bering Strait. Application of current rules of nomenclature to Baird's original description (*loc. cit.*) indicates that Arikam Island is the type locality.

This name was not considered by J. A. Allen when he reported under the name *Putorius* (*Arctogale*) *ermineus* specimens from eastern Siberia resulting from the Jesup North Pacific Expedition

(Bull. Amer. Mus. Nat. Hist., vol. 19, p. 174, 1903) but was correctly applied by G. M. Allen (Proc. New England Zool. Club, vol. 5, p. 58, 1914) to specimens from Nijni Kolymsk.

In 1928, Ognev (Memuary Zoologicheskov otdelenia obshchevstva lyubiteli estestvoznania, vol. 2, p. 15) proposed the name *Mustela erminea orientalis* for the ermine of eastern Siberia, choosing as his type specimen one from Village Pokhodskoe on the Kolyma River (69° 04′ N, 160° 55′ E), which like Nijni Kolymsk is near the mouth of the Kolyma River. Apparently Ognev overlooked, or was unaware of the application of, Baird's earlier proposed name for the only reference that he makes to it, so far as I can find in his published writings, is in the synonymy of *Mustela erminea orientalis* in his "The Mammals of USSR and Adjacent Countries" (vol. 3, p. 33, 1935). There Ognev lists "1914 *Mustela kanei* Allen, Gl., ..."

Fortunately, the United States National Museum contains a good representation of *Mustela erminea* from the region of the mouth of the Kolyma River, particularly from Nijni Kolymsk, obtained in 1915 by C. Armory, Jr. These practical topotypes of *M. e. orientalis* in comparison with the material used by Baird as basis for his name *kaneii* reveal no differences judged to be of systematic worth. Of course, certainty as to the subspecific identity of ermines from the mainland of Asia with those from Arikam Island can be felt only when adequate topotypes are available from the island; the type of *kaneii* which is the only available specimen from the island clearly is of the species *Mustela erminea* and is indistinguishable in color from other Siberian ermines. The animal is young and, on this account and because the postmolar parts of the cranium and lower jaws are lacking, no cranial characters of subspecific worth are provided. My conclusion is that, in the present state of knowledge, the name proper to apply to the ermine of eastern Siberia with geographic range as outlined by Ognev (*op. cit.*, 1935, p. 33, and map 1 on p. 41) is:

Mustela erminea kaneii (Baird)

Putorius kaneii Baird, Mammals of North America, p. 172, 1857.

Type.—Male, young, skin with skull; no. $\frac{2330}{37990}$, U. S. Nat. Mus.; Arikam Island, Bering Sea, Siberia; previous to March, 1857; obtained by W. Stimpson; original no. 358.

The skin is in a good state of preservation. The postmolar parts of the cranium and lower jaws are gone. Open sutures between the bones on the upper face of the rostrum clearly show the specimen to be young. The teeth all are present. M_1 is 5.4 mm. long. P^4 measures 4.8 on the lateral side and 5.0 on the medial side. These measurements are larger than recorded for any female and are nearer those of small males.

Range.—Eastern Siberia, Kamchatka excepted, from the Polar seas south to about 60° N and from Bering Strait westward to the River Lena or farther.

Diagnosis.—Size medium, see measurements; in full winter pelage black tail-tip averaging 88 per cent of length of tail-vertebrae; skull relatively flat and broad.

Comparisons.—From *M. e. ognevi* Jurgenson 1932, the race to the westward, known to me by adequate material from the Turkhansk district, *kaneii* differs, as pointed out by Ognev (The Mammals of the USSR. . . ., vol. 3, p. 28, 1935) in smaller skull, that is more flattened (shallower) in both facial and parietal regions. The remaining differences recorded by Ognev (*loc. cit.*) are not apparent with our material; indeed the tooth rows in specimens from Nijni Kolymsk are shorter, instead of longer than in those of *ognevi*. From *M. e. arctica* of Alaska (topotypes and specimens from Tanana) skulls of *kaneii* differ as follows: smaller; relatively, as well as actually, narrower except in mastoidal region where relatively (to basilar length) the width is more; preorbital part of skull shallower as well as narrower. From *M. e. digna*, *kaneii* differs as follows: skull broader, actually as well as relatively; waist of interorbital constriction shorter; tooth rows and tympanic bullae relatively as well as actually shorter. Lack of specimens of *M. e. transbaikalica* and *M. e. baturini*, races whose geographic ranges meet that of *kaneii* on the south, prevents my adding anything to what Ognev (*op. cit.*) has written.

Remarks.—In making cranial comparisons, care has been taken to use specimens of comparable age and sex. In the table of measurements the adult males there recorded are of comparable age (more than one year old) and any one lot of subadults is of about the same age as any other excepting the lot from Nijni Kolymsk, the animals from which place average about 6 weeks younger than subadults from the other places. This lesser age explains in part, but by no means entirely, why certain measurements of width of the skull are smallest in the subadults from Nijni Kolymsk.

The subspecies (geographic races) here recognized are not strongly differentiated—nowhere nearly as well marked as are the races of *Mustela frenata*—and all the differences detected are in the skull. If ideally abundant material was available, external measurements (length of body, tail, hind foot and ear) might provide some differences useful in distinguishing subspecies but the differences would be slight. Study of the coloration reveals nothing that I judge to be other than individual variations or variations that owe their existence to differences in ontogeny.

By thus commenting on the slight (relative to *M. frenata*) racial distinctions I do not intend to imply that study of additional material will not reveal true geographic variations in *Mustela erminea*

of eastern Asia, conceivably requiring further subspecific separation. Among the specimens here assigned to *M. e. kaneii* there appears to be some geographic variation. Those from Nijni Kolymsk near the mouth of the Kolyma River are not exactly like specimens from Vassiliev, 450 miles to the eastward and about 40 miles north of the estuary of the Anadyr River; the skulls of ermines from Vassiliev average larger, particularly in length of upper tooth rows and larger tympanic bullae.

Measurements.—Cranial measurements are given in the table at the end of this paper. External measurements, by the collector, of 2 adult males from Nijni Kolymsk and a subadult (slightly less than one year old) female from Pontilayha Kolymsk, are as follows: Total length, ♂, 341, 367, ♀, 287; length of tail vertebrae, 89, 95, 65; length of hind foot, 43, 51, 36 (in the dry state including the longest claw the hind feet measure 41.4, 47.5, 32.5).

Specimens examined.—Total number, 61. Localities are arranged from west to east. Unless otherwise indicated, specimens are in the collection of the Leningrad Academy of Sciences. Mouth of Lena River, 2; Miaktchirge Island, 1; Sabo-Sitsch [g?]e Island, 1; Aldan River, 25 verst from Iskutsk, 1; Tulara River, right tributary of Aldan River, 1; Arylach on Aldan River, 1; Uly-Tymyl Station, near source of Iana River, 1; village of Kytylyn-Sebyt near junction of Tyssy-Iurach and Dulgalacha rivers, 1; Buluguniachtach 60 kilometers from Verkhoiansk on Dulgalacha River, 1; Adytscha River on Kolym Trail, 1; village of Chabatschi on Adytscha River, 25 kilometers south of the station of Adytschenskaia, 2; station of Tostach on Tostachai River near its junction with Adytscha River, 1; Verkhoiansk River, Kanso-Uriach right tributary of Iana River, 80 kilometers north of the city of Verkhoiansk, 1; settlement of Sylgytyr, Jakutsk District, 11; village of Kasatschi, in region of Iakutsk, 1; mouth of Moma River, 1; village of Allaicha, valley of Indigirka, 9; Nijni Kolymsk, 10 (U. S. Nat. Mus.); Pontilayha Kolymsk, 2 (U. S. Nat. Mus.); Anadyr District, 1; Osselkino, near Markova, Anadyr River, 1; Aljtat-Kuulj River, Anadyr estuary, 1; botanical garden at Vassiliev, 8; village of Medro [nipot?], Chukotsk Peninsula, 1.

Ognev (*op. cit.*, pp. 31-33) pointed out cranial differences between ermines from Kamchatka and those from the mainland, but with inadequate Alaskan material was unable to differentiate the animal from Kamchatka from *Putorius arcticus* Merriam with type locality at Point Barrow, Alaska. He recognized that the ermine of Kamchatka might be an unnamed subspecies, being of the opinion that adequate series of skins—which he lacked—from Alaska and Kamchatka would show the animal from the latter place to be paler. In the absence of skins from Kamchatka I can offer no opinion about the color but the 9 skulls from the Leningrad Academy of Sciences, labeled merely as Kamchatka, and taken by Grebnitzsky in 1864 or